

SEQUENCE LISTING

SEQ ID NO:1

Mouse Melanopsin cDNA

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5      1 cactcattcc tttgcgcttc attggacatt aagcagtcag cagcccaaag agcagctcca
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     181 gagcatggac tctccttcag gaccaagagt cttgtcaagc ttaactcagg atcccagctt
     241 cacaaccagt cctgccctgc aaggcatttg gaacggcact cagaacgtct ccgtaagagc
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    361 cccacagctc gatgtcccag accatgctca ctatacccta ggcacgggtga tcctgctggg
    421 gggactcaca gggatgctgg gcaatctgac ggtcatctac accttctgca ggaacagagg
    481 cctgcggaca ccagcaaaca tgttcatcat caacctcgca gtcagcgact tcctcatgtc
    541 agtcactcag gccccgggtc tctttgccag cagcctctac aagaagtggc tctttgggga
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    661 cctgacagcc atagccatgg accgctatct ggtgatcaca cgtccactgg ccaccatcgg
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  1681 tccccatccc catacatccc agtttccctt tgctttccta gaggatgatg tgactctcag
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  1861 tataacttat gtgcccttga agatatgtgg cctacagcag agaacaactc atgctgtgtg
  1921 ggaccatggt cctggcatat atgctctctg tcaactgtgat gcctctgtgt tgtgtgggtg
  1981 acagagtgtg atggtgttca cctctctgcg cgggttttga tgctgggcaa acacggggaa
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SEQ ID NO:2

Mouse Melanopsin polypeptide

MDSPSGPRVLSSLTQDPSFTTSPALQGIWNGTQNVSVRAQLLSV

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45  SPTTSAHQAAAWVPFPTVDVDPDAHYYTLGTVILLVGLTGMLGNLTVIYTFERNRGLRT
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    TAIAMDRYLVIITRPLATIGRGSKRRTALVLLGVWLYALAWSLPPFFGWSAYVPEGLLT
    SCSWDYMTFTFPQVRAYTMLLFCFVFFLPLLIIFCYIFIFRAIRETGRACEGCGESPL
    RQRQWQRLQSEWKMAKVALIVILLFVLSWAPYSTVALVAFAGYSHILTPYMSSVPAV
50  IAKASAIHNPIIYAIHPKYRVAIAQHLPLCLGVLLGVSGQRSHPSLSYRSTHRSTLSS
    QSSDLISWISGRKRQESLGESEVGTDTTETTAAWGAAQQASGQSFCSQNLEDGELKAS
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55 SEQ ID NO:3

Human Melanopsin cDNA

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      1 cggacacagg agaaagcagc gggtaggcta agcaggggtg ctgaggatgg aggaaagtgt
     61 ggaggctgag cacagctgaa gtctctgagc ccctgtgccc ttgacttctc tgtgggctcg

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5 121 agcaaggacc atcccaactc aggatgaacc ctcttcggg gccaaagagtc ccgcccagcc
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 241 agagcagcat ctccagcctg ggccggcttc catccatcag tcccacagca cctgggactt
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 10 661 cagccccgct ggccaccttt ggtgtggcgt ccaagaggcg tggggcattt gtctgtctgg
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 781 tgcccagggg gttgctgaca tcctgtctct gggactacat gagcttcacg ccggccgtgc
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 15 961 gggcctgcaa gggcaatggc gagtccctgt ggcagcggca gcggctgcag agcgagtga
 1021 agatggccaa gatcatgctg ctggctatcc tcctcttctg gctctcctgg gctccctatt
 1081 ccgctgtggc cctggtggcc tttgctgggt acgcacacgt cctgacaccc tacatgagct
 1141 cggtgccagc cgtcatcgcc aaggcctctg caatccacaa ccccatcatt tacgccatca
 1201 cccaccccaa gtacaggggtg gccattgccc agcacctgcc ctgcctgggg gtgctgctgg
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 35 2161 caccaagcac atgcgtgcac actctgcgtc tgtgattcat tcatgtagt ggtctaagct
 2221 cctcccaggg ctgtgtggat ctgacagggt ataggaaaat aaaaagcgga gaaggtgtct
 2281 tcag

40 SEQ ID NO:4

Human Melanopsin polypeptide

MNPPSGPRVPPSPTQEPSCMATPAPPSWWDSSQSSISSLGRPLPS

ISPTAPGTWAAAWVPLPTVDVPDHAHYTLGTVILLVGLTGMLGNLTVIYTFCSRSLR

45 TPANMFIINLAVSDFLMSFTQAPVFFTSSLYKQWLFGETGCEFYAFCGALFGISSMIT

LTAIALDRYLVITRPLATFGVASKRRAAFVLLGVWLYALAWSLPPFFGWSAYVPEGLL

TSCSWDYMSFTPAVRAYTMLLCCFVFFLPLLI IYCYIFIFRAIRETGRALQTFGACK

NGESLWQRQLQSECKMAKIMLLVILLFVLSWAPYSAVALVAFAGYAHVLTPTMSSV

PAVIAKASAIHNPIIYAI THPKYRVAIAQHLPCLGVLLGVSRHRSPYPSYRSTHRST

LTSHTSNLWSISIRRRQESLGSESEVGWTHMEAAAVWGAAQQANGRSLYGQLEDLEA

50 KAPPRPQGHEAETPGKTKGLIPSQDPRM